

joint being comparatively more susceptible to electrolytic severability than said core wire and said at least one array element, and

C¹
(c) a retainer assembly comprising said at least one array element, said retainer assembly having a first delivery shape when retained within said elongate tubular delivery device and having a distal delivery end and a proximal delivery end, and a second deployed shape configured for retaining a vaso-occlusive device in an aneurysm, said second deployed shape being different than said first delivery shape when said retainer assembly is not retained within said tubular delivery device and having a distal deployed end and a proximal deployed end, said at least one array element extending outwardly from said joint in said second deployed shape, and wherein after electrolytic severance from said core wire said retainer assembly includes a residual joint.

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43. (Once Amended) The implantable retainer of claim 31, wherein said secondary deployed shape approximates the shape of a vascular aneurysm.

44. (Once Amended) The implantable retainer of claim 31, wherein said retainer assembly encloses a volume and wherein said retainer contains a helically wound vaso-occlusive device.

REMARKS

The amendments to the claims adds no new matter to the pending application. Amendment to claim 31 is to make explicit of what was already inherent in the claim. Amendments to claims 43 and 44 are to bring the language of the claims into conformity with that in the independent claim 31.

I. CLAIM REJECTIONS UNDER 35 U.S.C. § 102/103

Claims 31, 32, 40, 41, 43, and 44 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,522,836 issued to Palermo. Claims 31, 36, and 42 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,690,671 issued to McGurk et al. (McGurk). Claims 31-33, 35, and 36-43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,354,295 issued to Guglielmi et al. (Guglielmi). Applicants respectfully note that in order to sustain a rejection under §102, each element in the rejected claim must be found, either expressly or inherently, in the cited reference.

Amended claim 31 recites a retainer assembly comprising said at least one array element... and having... a second deployed shape configured for retaining a vaso-occlusive device in the aneurysm. None of the cited references discloses or suggests such an element.

Palermo discloses a vaso-occlusive device (i.e. coil 108) deliverable to within an aneurysm sac 130. (See Figures 2-6, Abstract, and Column 6, lines 19-59). There is nothing in Palermo that discloses or suggests a retainer assembly having a shape configured for retaining a delivered vaso-occlusive device (i.e., the coil 108), as recited in claim 31. As such, amended claim 31 is believed allowable over Palermo.

McGurk discloses an embolic element 10 deliverable to within an aneurysm. (Figures 1, 2, and 6-11, and Column 7, lines 20-45). There is nothing in McGurk that discloses or suggests a retainer assembly for retaining the embolic element 10 once it is delivered into an aneurysm. According to the Office Action, McGurk discloses an “array element 34”. Applicants respectfully disagree. The coil section 34 of the guide wire 30 disclosed in McGurk is used to deliver the embolic element 10. (Column 7, lines 5-45). As such the coil section 34 is not an array element, nor is it a part of a retainer assembly as recited in claim 31. Because there is nothing in McGurk that

discloses or suggests the array element as recited in claim 31, claim 31 is believed allowable over McGurk.

Furthermore, McGurk does not disclose or suggest a joint being electrolytically severable, as recited in claim 31. Relying on Column 2, lines 42-46 and Columns 2-5, the Office Action states that McGurk discloses an electrolytically severable “joint (10)”. Applicants respectfully disagree. McGurk discloses an embolic element 10 that can attain an expanded configuration when subjected to heating. (Column 2, lines 42-46, and Column 3, line 49 to Column 4, line 11). As such, the embolic element 10 is not a “joint”, and the cited passage in the Office Action only describes how the embolic element 10 can be heated. Because there is nothing in McGurk that discloses or suggests an electrolytically severable joint as recited in claim 31, claim 31 is believed allowable over McGurk for this additional reason.

Guglielmi discloses a coil 56 detachably coupled to a wire 42 by a joint 54. (Figure 3). The coil 56 is deliverable to within an aneurysm 64 as a vaso-occlusive device. (Figures 4 and 5). There is nothing in Guglielmi that discloses or suggests a retainer assembly for retaining the delivered (and detached) coil 56. As such, claim 31 is believed allowable over Guglielmi.

For at least the reasons that claim 31 is allowable over Palermo, McGurk, and Guglielmi, the remaining claims 32-44, which depend from claim 31, are also allowable over these references.

II. DOUBLE PATENTING REJECTIONS

Claims 31-40 and 42-44 stand rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-9 and 12-15 of U.S. Patent No. 6,086,577. Attached herewith is a Terminal Disclaimer disclaiming that portion of the term of any patent granted on the present

application extending beyond the term of United States Patent No. 6,086,577. It is believed that the Terminal Disclaimer overcomes the double patenting rejection.

CONCLUSION

Based on the foregoing, all claims are believed allowable and a Notice of Allowance is respectfully requested. If the Examiner has any questions or comments regarding this amendment, the Examiner is respectfully requested to contact the undersigned at the number listed below.

Respectfully submitted,

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Dated: 11-20-02

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Enclosure: Marked up version of the amended claims pursuant to 37 C.F.R. § 1.121(c)(1)(ii).
Terminal Disclaimer.

Marked up version of the amended claims pursuant to 37 C.F.R. § 1.121(c)(1)(ii).

31. (Once Amended) An implantable retainer, deliverable via an elongate tubular delivery device for retaining vaso-occlusive device in an aneurysm, comprising:

(a) a core wire having a proximal end and a distal end,

(b) a joint extending between the distal end of the core wire and at least one array element, said joint being electrolytically severable upon application of a suitable current to said joint, said joint being comparatively more susceptible to electrolytic severability than said core wire and said at least one array element, and

(c) a retainer assembly comprising said at least one array element, said retainer assembly having a first delivery shape when retained within said elongate tubular delivery device and having a distal delivery end and a proximal delivery end, and a second deployed shape configured for retaining a vaso-occlusive device in an aneurysm, said second deployed shape being different than said first delivery shape when said retainer assembly is not retained within said tubular delivery device and having a distal deployed end and [an]a proximal deployed end, said at least one array element extending outwardly from said joint in said second deployed shape, and wherein after electrolytic severance from said core wire said retainer assembly includes a residual joint.

43. (Once Amended) The implantable retainer of claim 31, wherein said secondary [form]deployed shape approximates the shape of a vascular aneurysm.

44. (Once Amended) The implantable retainer of claim 31, wherein said retainer assembly encloses a volume and wherein said [implantable]retainer contains a helically wound vaso-occlusive device.